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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,236	06/20/2000	Akihiko Yagasaki	37174:164287	5862

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EXAMINER

NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 12/10/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/597,236

Applicant(s)
Yagasaki

Examiner
Tuyen Nguyen

Art Unit
2832



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jun 20, 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152) _____
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 20) ☐ Other: _____

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 09/28/1999. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Drawings

2. Figures 9-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a *single paragraph* on a separate sheet within the range of *50 to 150 words*. *It is important that the abstract not exceed 150 words* in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

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Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) Title of the Invention.
 - (b) Cross-References to Related Applications.
 - © Statement Regarding Federally Sponsored Research or Development.
 - (d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
 - (e) Background of the Invention.
 - 1. Field of the Invention.
 - 2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
 - (f) Brief Summary of the Invention.
 - (g) Brief Description of the Several Views of the Drawing(s).
 - (h) Detailed Description of the Invention.
 - (I) Claim or Claims (commencing on a separate sheet).
 - (j) Abstract of the Disclosure (commencing on a separate sheet).
 - (k) Drawings.
 - (l) Sequence Listing (see 37 CFR 1.821-1.825).
5. The disclosure is objected to because of the following informalities:
- On page 15, lines 4, 8, 12, 14, 16 and through out the specification, "planer" should be corrected as --planar--.
 - On page 17, line 12, "4" should be corrected as --9--.
- Appropriate correction is required.

Claim Objections

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6. Claim 2 is objected to because of the following informalities: In line 9, "the planer" should be corrected as --the planar--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant should clarify the structure of the primary and secondary coils. The phrase "function as an isolation (noise-cutoff) transformer *by changing the coil layers of one or both of the coils formed by winding an insulated covered, copper wire to a multi-layer, multi-winding coil*" is unclear. There is no antecedent basis for "the coil layers." In line 8, applicant should clarify the arrangement of the short circuit rings relative to the primary and secondary coils. In lines 11 and 12, the term "approximately" is a relative term. Applicant should clarify what is intended by the thickness of the short circuit ring is made approximately "identical to or less than the *skin depth of the induced current generated by the skin effect in the high frequency region, where resonances should be suppressed.*" There is no antecedent basis for "the high frequency region." Claims 4-7 inherit the defects of the parent claim.

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Regarding claim 2, applicant should clarify the structure of the primary and secondary coils. The phrase “function as an isolation transformer *by changing the coil layers of one or both of the coils formed by winding spirally an insulated covered, copper wire to a multi-layer, multi-winding coil*” is unclear. There is no antecedent basis for “the coil layers.” In line 8, applicant should clarify the arrangement of the short circuit rings relative to the primary and secondary coils. In line 9, there is no antecedent basis for “the planer configuration of the aforementioned conducting short-circuit rings.” In lines 10 and 11, the term “approximately” is a relative term. Applicant should clarify what is intended by the thickness of the short circuit ring is made approximately “identical to or less than the *skin depth of the induced current generated by the skin effect in the high frequency region, where resonances should be suppressed.*” There is no antecedent basis for “the high frequency region.” Claims 10-13 inherit the defects of the parent claim.

Regarding claim 3, applicant should clarify the structure of the primary and secondary coils. The phrase “function as an isolation transformer *by changing the coil layers of one or both of the coils formed by winding cylindrically an insulated covered, copper wire to a multi-layer, multi-winding coil*” is unclear. There is no antecedent basis for “the coil layers.” In line 8, applicant should clarify the arrangement of the short circuit rings relative to the primary and secondary coils. There is no antecedent basis for “the inner surface area of the aforementioned cylindrical short-circuit rings” or “the outer surface of the neighboring coil.” In lines 11 and 12, the term “approximately” is a relative term. Applicant should clarify what is intended by the thickness of the short circuit ring is made approximately “identical to or less than the *skin depth of the induced*

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current generated by the skin effect in the high frequency region, where resonances should be suppressed.” There is no antecedent basis for “the high frequency region.” Claims 14-17 inherit the defects of the parent claim.

Regarding claim 8, applicant should clarify the structure of the primary and secondary coils. The phrase “function as an isolation transformer *by changing the coil layers of one or both of the coils formed by winding an insulated covered, copper wire to a multi-layer, multi-winding coil*” is unclear. There is no antecedent basis for “the coil layers.” In line 10, the term “approximately” is a relative term. In line 9, the surface of what does applicant intend. Applicant should clarify what is intended by “as thick as or less thicker than the *skin depth of the induced current generated by the skin effect in the high frequency region, where resonances should be suppressed.*” There is no antecedent basis for “the high frequency region.” Claim 9 inherit the defect of the parent claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-7 and 10-17, as best understood in view of the rejections under 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ganz [US 2,008,859] in view of applicant admitted prior art of Figure 9.

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Ganz discloses an inductive device [see figure 2] comprising:

- a core [25];
- first and second windings [22, 23] wound about the core; and
- conductive shielding means [26, 27, 28, 29, 30] disposed between each of the layers of the first and second windings.

Ganz discloses the instant claimed invention except for the specific structure of the conductive shielding means.

Applicant admitted prior art of Figure 9 discloses an isolation transformer comprising:

- primary and secondary windings [1, 2] formed of a plurality of layers and winding turns; wherein the winding turns formed of an insulated copper wire; and
- a short circuit ring [4] made of conducting film having a thickness of 7 micro-meter laminated with plastic film disposed between the primary and secondary windings.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the short-circuit ring design of applicant admitted prior art of Figure 9 in the device of Ganz for the purpose of controlling resonance induced by the windings.

11. Claims 8 and 9, as best understood in view of the rejections under 112 second paragraph, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi [JP 3-64009].

Sakaguchi discloses a transformer [see figures 7 and 8] comprising:

- a core structure [5]; and

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- primary and secondary windings [P, S] wound about the core structure, wherein the windings are formed of a multi-layer, multi-turns winding;

wherein the winding wires are formed of a conducting material [3], an insulating coating layer [4] and a magnetic conducting layer [6].

Sakaguchi discloses the instant claimed invention except for the conducting material being copper.

Copper is a well known material in the art for use in the electric wire to form the winding for the purpose of providing good conductivity.

Regarding claim 9, Sakaguchi discloses the instant claimed invention except for the thickness of the magnetic conducting layer.

It would have been an obvious matter of design choice, absent evidence of criticality shown in the present invention and the lack of implicit or explicit limit to a specific design in the prior art, to select a thickness of the conducting layer to be 7 micro-meter or less, since applicant has not disclosed that a thickness of 7 micro-meter for the conducting layer solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the thickness shown by the conducting layer of Sakaguchi.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- Lungu [US 4,926,111]; Harada [US 4,518,941]; van Laar [US 4,356, 468]; Combs [US 3,638,155]; Bogner [US 3,416,111] McKechnie [US 2,592,817]; and Pfannkuche [US 343,602].

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Gellner, can be reached at (703)308-1721. The fax number for this Group is (703)308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.

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December 4, 2001

Tuyen T. Nguyen